Supplementary materials Table 1. DNA repair genes mutated in DT40 clones.

Gene	Function	Reference
ATM	Checkpoint control following double-strand breaks, oxidative stress response	Takao et al. 1999
XRCC3	Homologous recombination, which repairs double-strand breaks arising during replication and γ-ray-induced breaks at S and G2 phases	Takata et al. 2001
RAD54	Homologous recombination, which repairs double-strand breaks arising during replication and γ-ray-induced breaks at S and G2 phases	Bezzubova et al. 1997
KU70	Non-homologous end-joining, which repairs double-strand breaks at any cell-cycle phase	Takata et al. 1998
UBC13	Translesion DNA synthesis, homologous recombination-mediated double-strand break repair	Zhao et al. 2007; Bennett and Harper 2008
FANCC	Damage response to interstrand cross-links	Hirano et al. 2004
REV3	Translesion DNA synthesis, the catalytic subunit of Pol-$\tilde{z}$	Sonoda et al. 2003; Okada et al. 2005
XPA	Nucleotide excision repair, which eliminates bulky base damage, including UV-induced pyrimidine dimers	Okada et al. 2002
XPG	Nucleotide excision repair	Kikuchi et al. 2005
POL-β	Base excision repair, which repairs single-strand breaks or base damage caused by oxidation, alkylation, and hydrolysis	Tano et al. 2007; Yoshimura et al. 2006

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